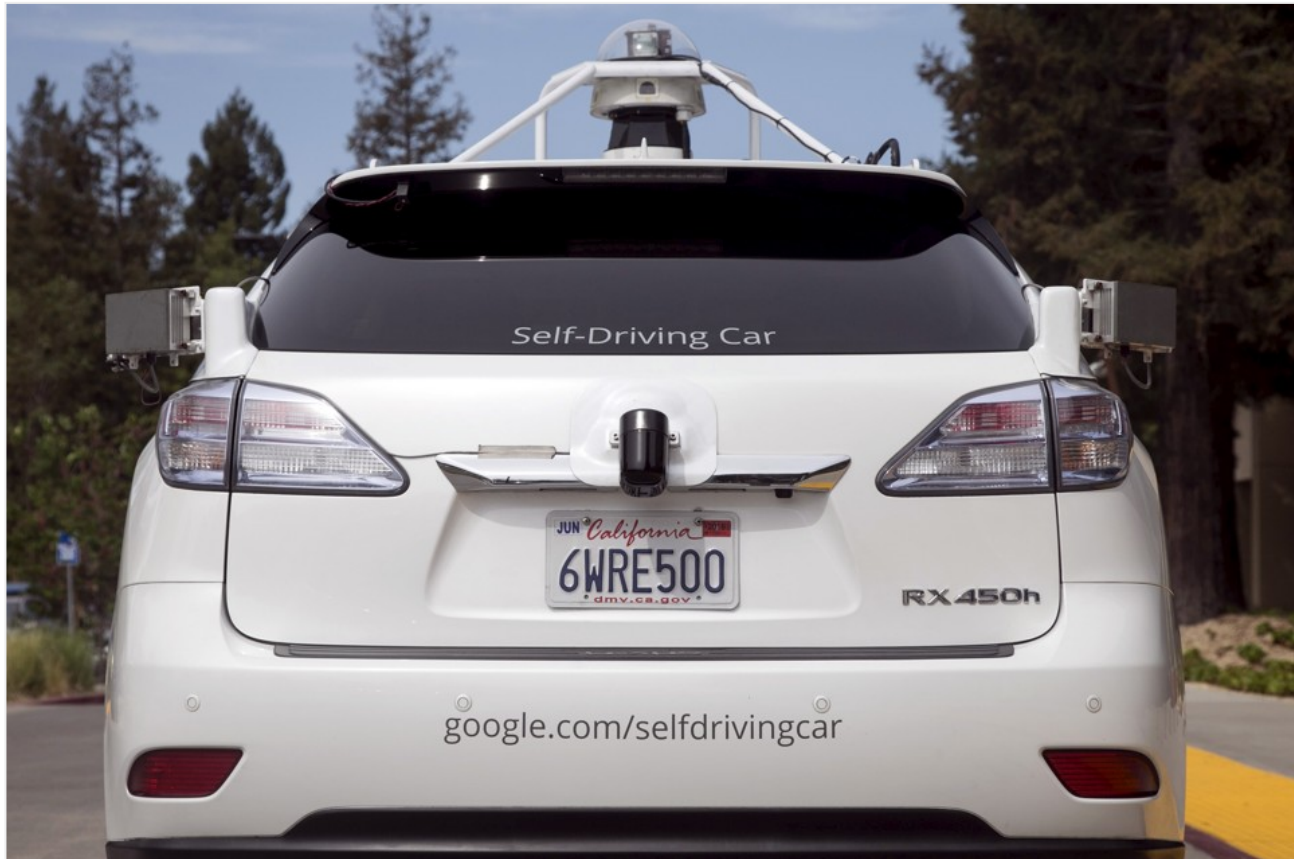


EXHIBIT 23

The Atlantic

Public Records Suggest One Company Is Dominating the Self-Driving Cars Race

Eleven manufacturers have test permits in California, but how many driverless vehicles does each have on the road?



A Lexus SUV equipped with Google self-driving sensors in Mountain View, California

Elijah Nouvelage / Reuters

ADRIENNE LAFRANCE

MAR 10, 2016

TECHNOLOGY

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No company has the self-driving car arena cornered like Google.

For one thing, Google has been at this for a while. Its self-driving car project launched in 2009, and the company is savvy about sharing its work with the public. They've been unusually transparent (up to a point)—releasing [monthly accident reports](#), publishing [blog posts](#) about how the project has changed over time, and routinely participating in [interviews with reporters](#).

At the same time, many other companies have touted their own work building driverless vehicles, and until these cars actually appear in showrooms, [the race](#) to bring self-driving vehicles to the masses is anyone's game. Elon Musk, the CEO of Tesla, [told *Fortune*](#) earlier this year that he expects Tesla to have fully autonomous cars ready for market by 2018. That would be a full two years ahead of Google's already-ambitious target date of 2020 for getting its self-driving vehicles to consumers.

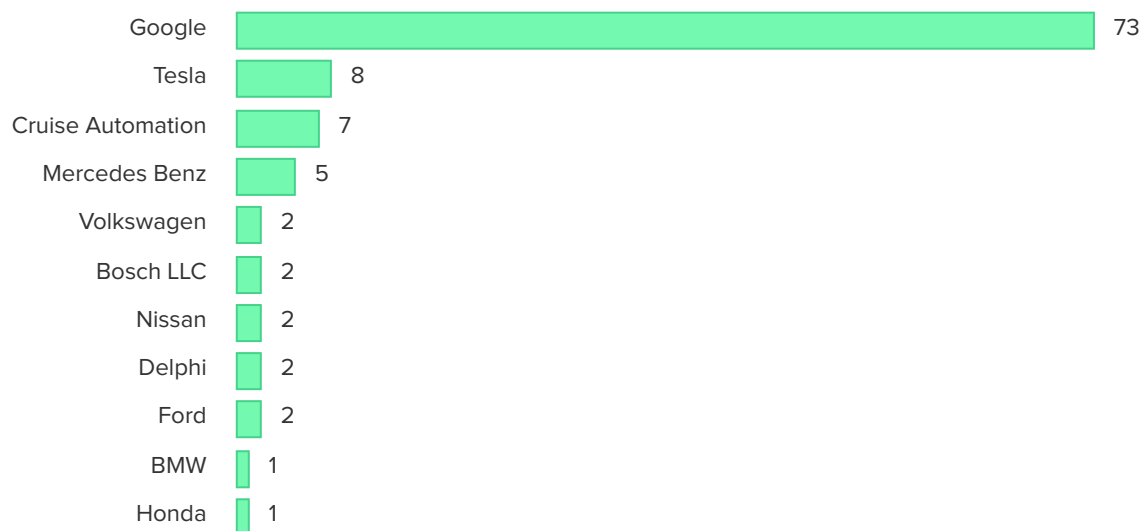
But a review of data I obtained from the California Department of Motor Vehicles suggests Tesla really isn't poised to catch up to Google's test-driving record, ostensibly a key component of readying autonomous vehicles for consumers. In fact, a closer look at the 11 manufacturers with test permits for self-driving cars in California only reinforces Google's leadership in the realm of autonomous driving. (Tesla didn't immediately respond to a request for comment this morning.)

With 73 cars and 230 approved human drivers in the state, Google has by far the most vehicles and people focused on test-driving its technology on public roads. (Plus, Google has additional vehicles in Texas and Washington.) That's nearly as many as the 77 cars with permits from the other 10 companies combined. Google also has 70 more human drivers permitted to do test driving than its rivals have altogether. Tesla comes in second for the most cars with test-driving permits. As of March 1, it had eight registered vehicles and five permitted drivers.

Here's how the numbers break down:

Test Permits for Self-Driving Vehicles in California

March 1, 2016



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The Atlantic

There are, of course, limitations to assessing the strength of any one company based solely on these numbers. Technological history has proved repeatedly that the factors that make one company's model win out over another's have to do with a soup of technological, economic, and social factors. Being first isn't everything. And even being the best doesn't guarantee success.

Plus, there are a few glaring omissions on the list above: Apple and Uber are both believed to be working on their own driverless-car strategies, though neither company has provided much, if any, detail on what they're building. At times it seems they haven't been sure themselves. Last year, the Uber CEO, Travis Kalanick, said his company wouldn't manufacture its own cars, but definitely wants its fleet to be self-driving eventually. More recently, the Uber's chief product officer hinted that it would consider manufacturing its own vehicles after all.

Apple's plans remain mysterious even to those who have worked on self-driving cars for years. "There is a joke in the Bay Area that if you know somebody in the vehicle space and they left their old job but they haven't updated their LinkedIn,

they must be at Apple,” Chris Gerdes, a professor of mechanical engineering at Stanford University, [told me](#) last fall. And in a chapter of this saga that seems straight out of Willy Wonka, residents in Sunnyvale, California, [have complained](#) of middle-of-the-night “loud motor noises” roaring out of a former Pepsi bottling plant leased by Apple.

Amid all the secrecy, public records in California help put a spotlight on the testing that’s being done publicly. That work is meaningful and revealing. Any company that wants to be a leader in the design and manufacture of self-driving vehicles will eventually have to put their cars and trucks on real roadways. For now, in California at least, Google is dominating them.

ABOUT THE AUTHOR



ADRIENNE LAFRANCE is a staff writer at *The Atlantic*, where she covers technology. She was previously an investigative reporter for [Honolulu Civil Beat](#), [Nieman Journalism Lab](#), and [WBUR](#).



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